Eskom	Matimba Power Station Emissions report	Matimba Power Station

Title: **Matimba Power Station September 2022 emissions report**

Document Identifier:	**RP/247/026**
Plant Location:	**Emission management**
Area of Applicability:	**Matimba Power Station**
Functional Area Applicability:	**Environment**
Revision:	**1**
Total Pages:	**36**
Report Date:	**September 2022**
Disclosure Classification:	**Controlled**

Compiled by	Functional Responsibility	Authorized by
WC Mocke	**MC Mamabolo**	**Obakeng Mabotja**
Environmental Officer	**Environmental Manager**	**General Manager**
Date: 2022/11/03	Date: 03/11/2022	Date: 2022/11/04

Content

Figures

1. Report Summary

Matimba Power Station was issued with an Atmospheric Emission License (H16/1/13-WDM05) in November 2021. The License requires the license holder to submit monthly reports to the Department. This report contains the required information as specified in the license for September 2022.

During the period under review, eight exceedances of the daily particulate matter emission limit (50mg/Nm^3) occurred. All exceedances remained within the 48-hour grace period. No exceedances of the monthly SO_x limit (3500mg/Nm^3) or the daily NO_x emission limit (750mg/Nm^3) occurred.

Emission trends and tonnages reported in this report were calculated based on correlation curves of October 2020. As per the letters sent to your office on 09 September 2022 and 28 October 2022, the new curves are in the process of being reviewed and implemented.

For the month of October Matimba Power Station used a total of 1252,8 tons of fuel oil, exceeding the monthly limit of 1200 tons. The increased usage was due to fuel oil support required to stabilised boiler conditions for unit 2 after a transformer became defective in the specific unit. Detailed information regarding the incident was submitted to your office in a letter, on 14 October 2022.

More information regarding above mentioned issues is provided in the relevant sections within the report.

2. Emission information

2.1 Raw materials and products

Table 1: Quantity of Raw Materials and Products used/produced for the month

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption Rate (Quantity)	Consumption Rate
	Coal	Tons/month	1 500 000	978 786
	Fuel Oil	Tons/month	1 200	1252,791
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	2313,699

As per the notification sent to your office on 14 October 2022, Matimba Power Station exceeded the monthly fuel oil usage limit of 1200 Tons per month. The exceedance was due to multiple light-ups for unit 2 after a transformer failure. The unit was operated with fuel oil support for the period when the generating transformer was defected, i.e., from 07 to 09 September 2022.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99,92%
Unit 2	Electrostatic Precipitator	100%	99,95%
Unit 3	Electrostatic Precipitator	100%	Unit Off-line
Unit 4	Electrostatic Precipitator	100%	99,9%
Unit 5	Electrostatic Precipitator	100%	99,89%
Unit 6	Electrostatic Precipitator	100%	99,9%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	99%
Unit 2	SO_3 Plant	100%	90%
Unit 3	SO_3 Plant	100%	Unit Off-line
Unit 4	SO_3 Plant	100%	100%
Unit 5	SO_3 Plant	100%	99%
Unit 6	SO_3 Plant	100%	99%

Flue gas conditioning plant availability was below the required 100% for units 1,2 5 and 6 due to maintenance activities and unplanned breakdowns. Unit 2 flue gas conditioning plant recorded the lowest availability. This was due to low load conditions that leads to temperatures that are too low for the plant to be activated. Load was increased on 10 September 2022 and Sulphur plant could be activated.

2.3 Energy source characteristics

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1,01%
	Ash Content	40%	34,93%

Energy source characteristics remained within the ranges stipulated in the license.

2.4 Emissions reporting

2.4.1 Particulate Matter Emissions

Unit 1 Particulate Emissions

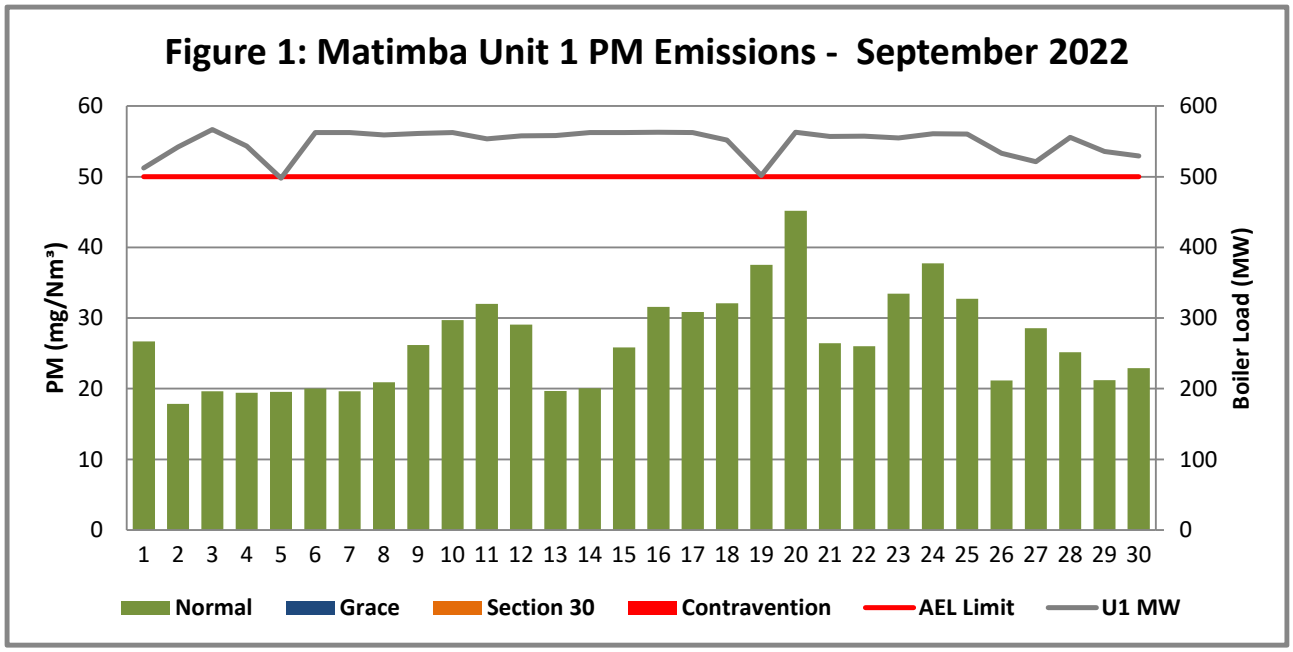

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of September 2022

Interpretation:

All daily averages below Particulate matter emission daily limit of 50 mg/Nm^3.

Unit 2 Particulate Emissions

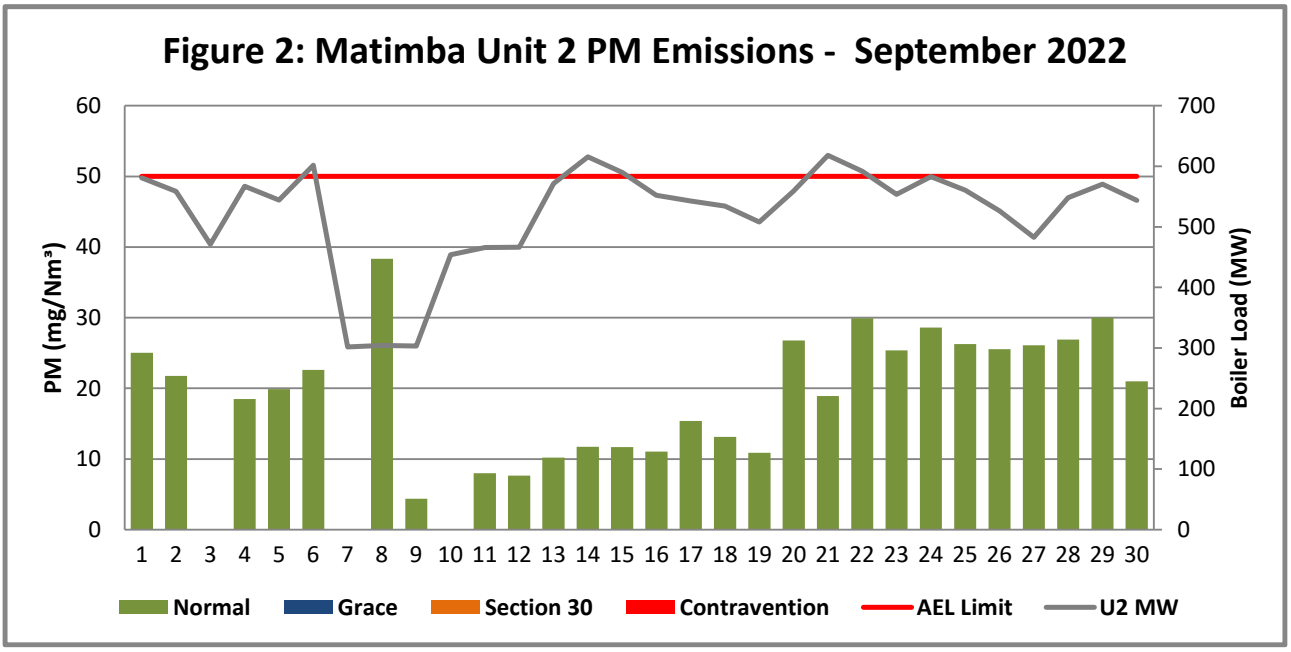

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of September 2022

Interpretation:

All daily averages below Particulate matter emission daily limit of 50 mg/Nm^3.

Unit 3 Particulate Emissions

Interpretation:

Unit 3 has been off load on outage from 13 August 2022.

Unit 4 Particulate Emissions

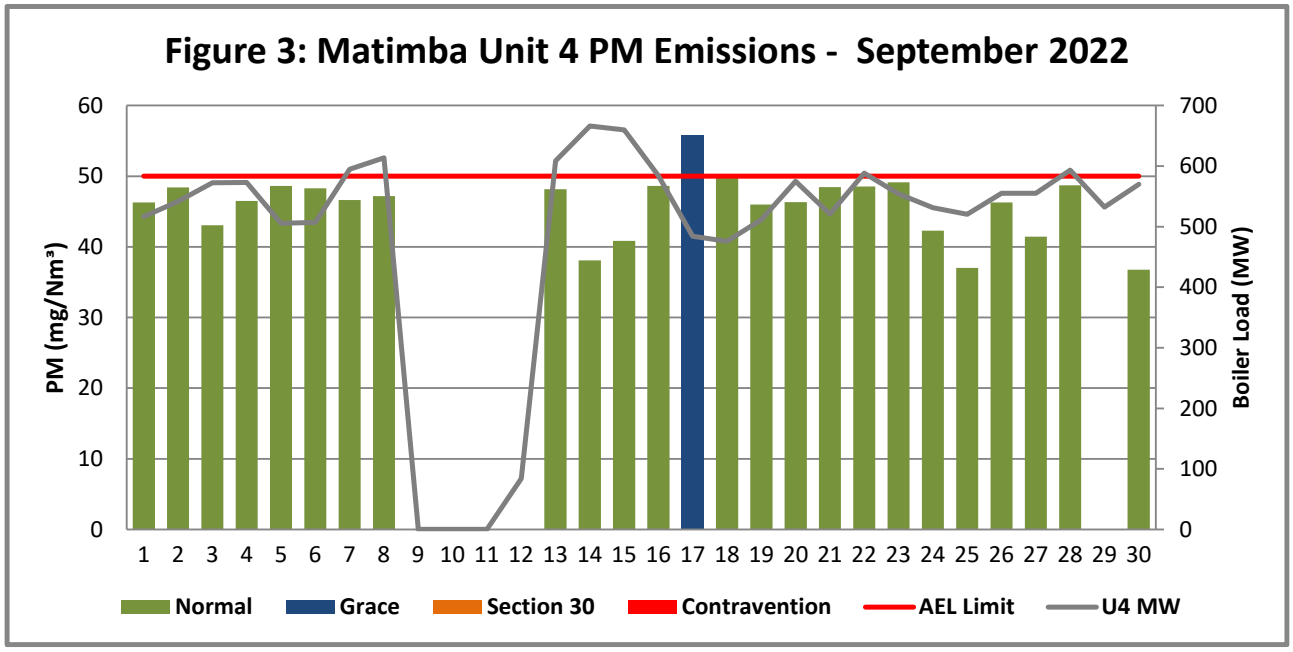

Figure 3: Particulate matter daily average emissions against emission limit for unit 4 for the month of September 2022

Interpretation:

Unit 4 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 17 September 2022. The exceedance was due to breakdowns on the ash conveyancing system leading to ash backlog within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The exceedance remained within the 48-hour grace period.

Unit 5 Particulate Emissions

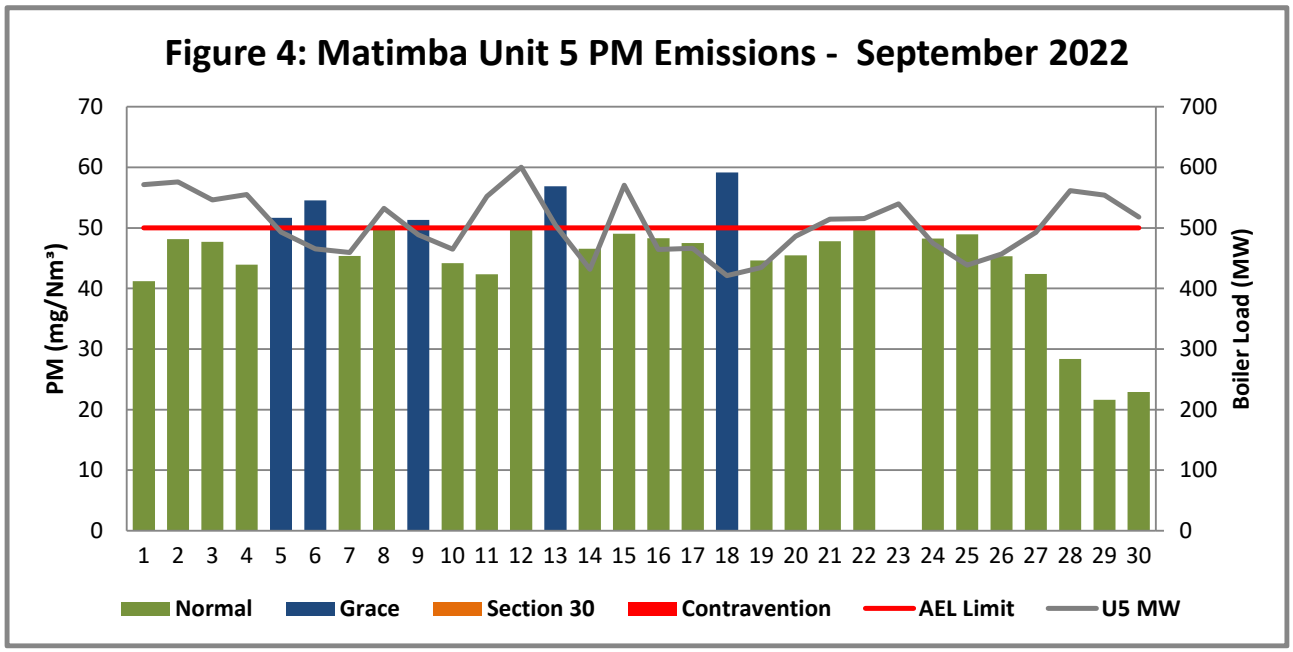

Figure 4: Particulate matter daily average emissions against emission limit for unit 5 for the month of September 2022

Interpretation:

Unit 5 exceeded the daily particulate matter limit of 50mg/Nm^3 on 5 and 6 September 2022, 9 September 2022, 13 September 2022, and 18 September 2022. The exceedances were due to breakdowns on the ash removal system, leading to ash backlog within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The exceedances remained within the 48-hour grace period.

Unit 6 Particulate Emissions

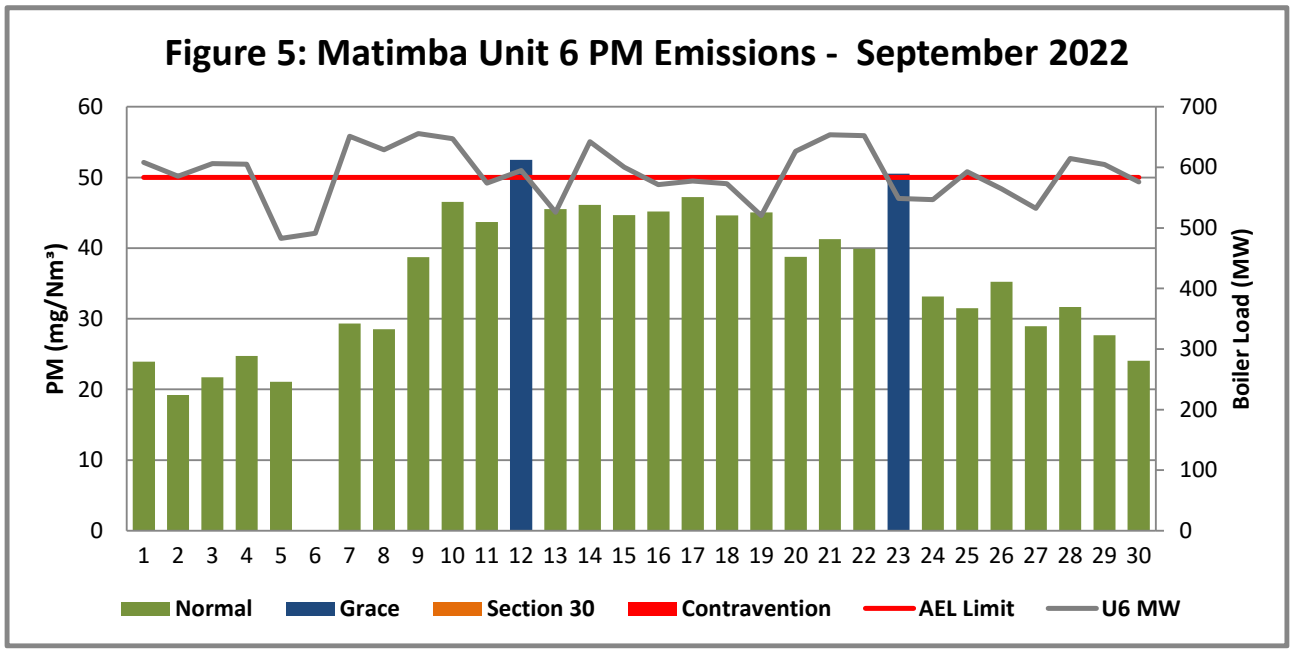

Figure 5: Particulate matter daily average emissions against emission limit for unit 6 for the month of September 2022

Interpretation:

Unit 6 exceeded the daily particulate matter emission limit of 50mg/Nm^3 on 12 and 23 September 2022. The exceedances were due to breakdowns on the ash removal system, leading to ash backlog within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The exceedances remained below the 48-hour grace period.

2.4.2 Gaseous Emissions

Unit 1 SO_2 Emissions

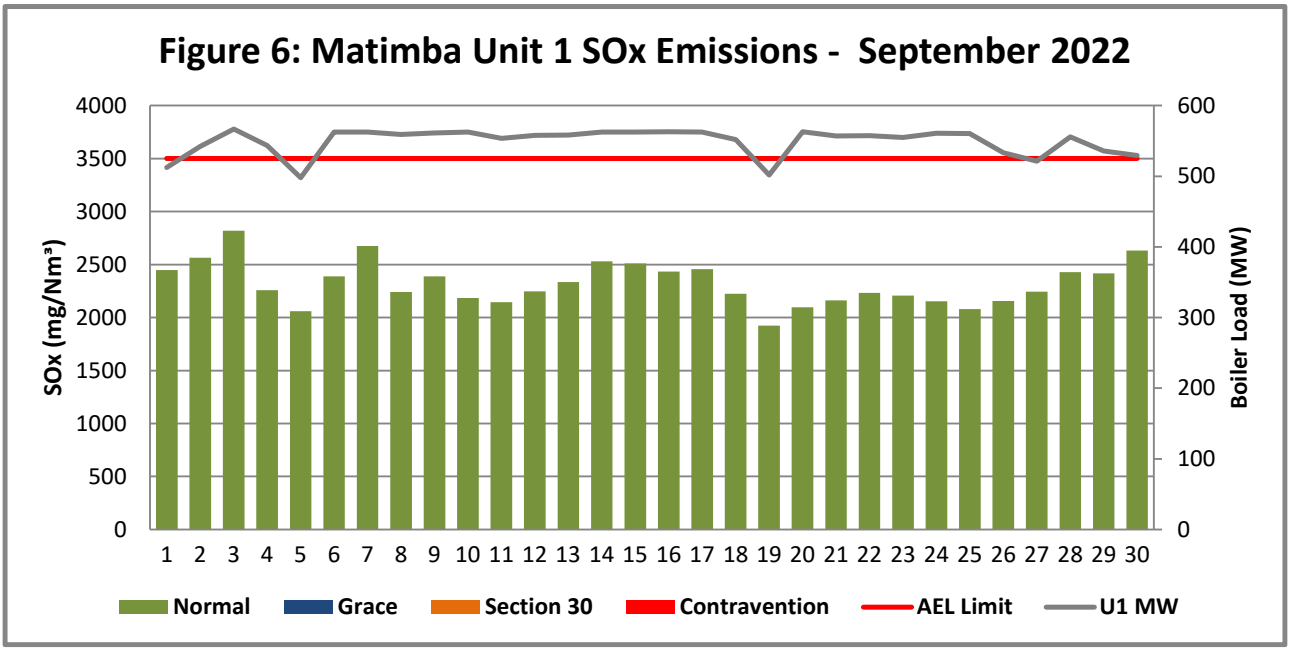

Figure 6: SO2 daily average emissions against emission limit for unit 1 for the month of September 2022

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

.

Unit 2 SO_2 Emissions

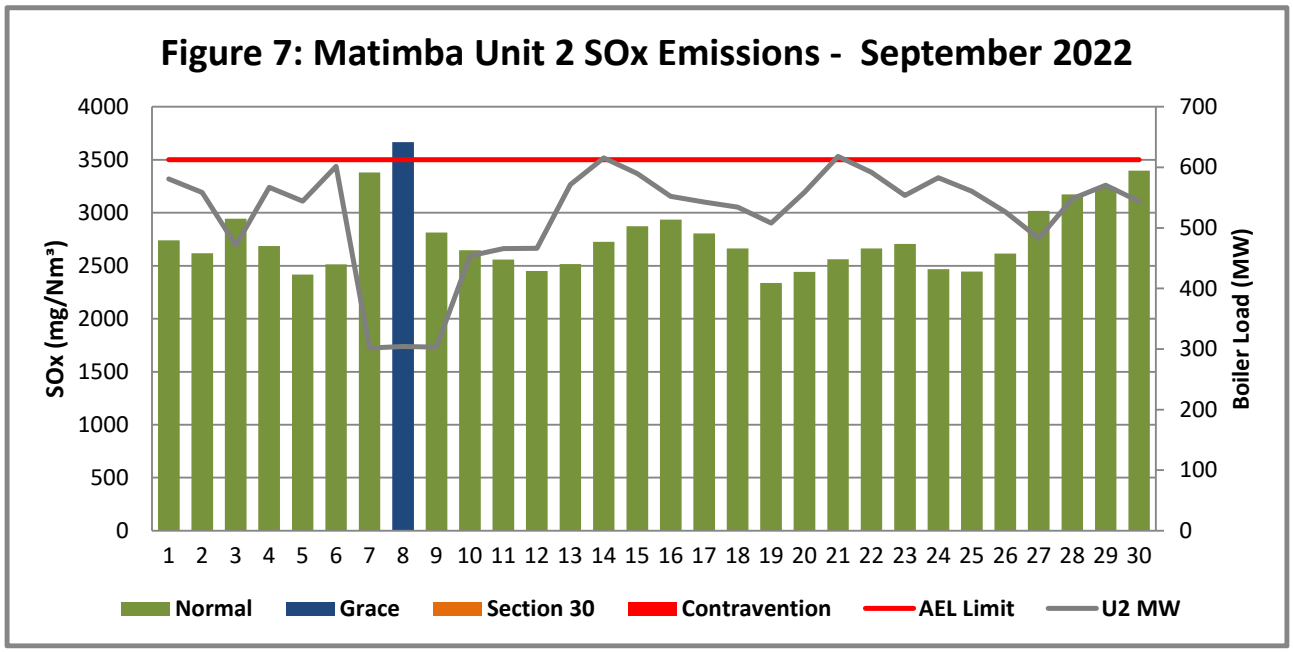

Figure 7: SO2 daily average emissions against emission limit for unit 2 for the month of September 2022

Interpretation:

Unit 2 experienced increased SOx emissions on 7, 8 and 9 September 2022. The increase was due to the increased fuel oil used between 7 and 9 September 2022. Increased fuel oil support was required on the unit due to a transformer failure. The monthly average emissions for September was 2767,3mg/Nm^3, below the monthly average limit of 3500 mg/Nm^3.

Unit 3 SO_2 Emissions

Interpretation:

Unit 3 has been off load on outage from 13 August 2022.

Unit 4 SO_2 Emissions

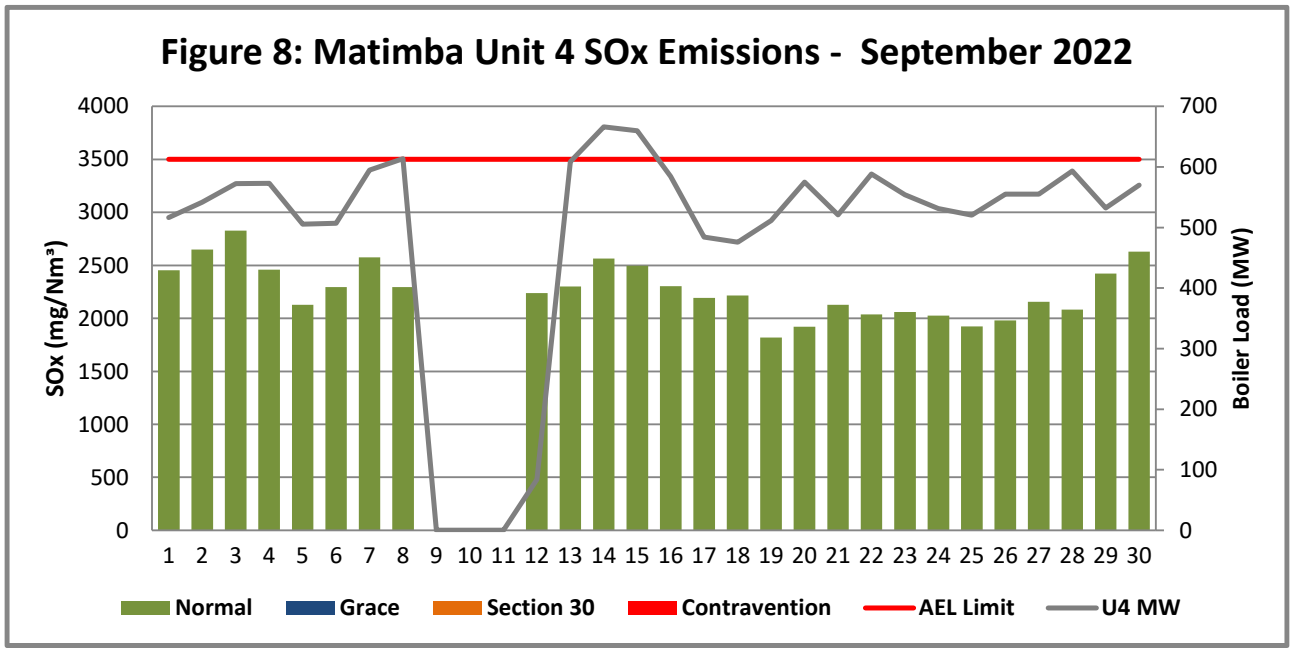

Figure 8: SO2 daily average emissions against emission limit for unit 4 for the month of September 2022

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

Unit 5 SO_2 Emissions

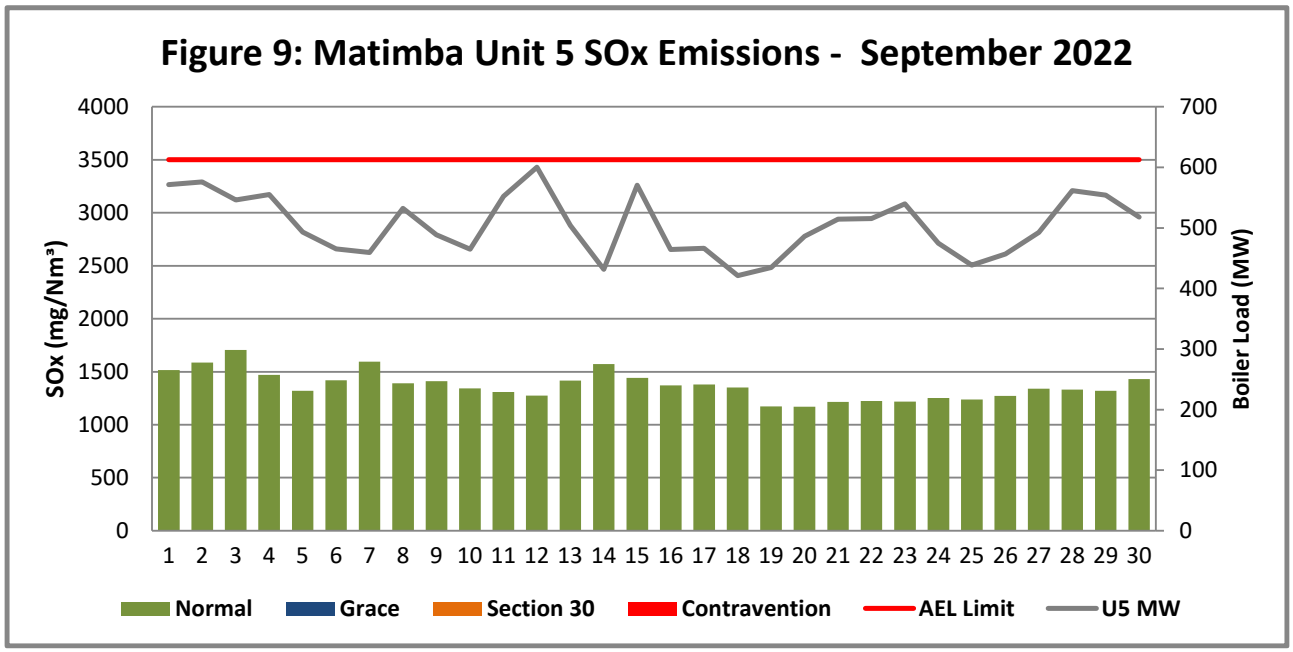

Figure 9: SO2 daily average emissions against emission limit for unit 5 for the month of September 2022

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

Unit 6 SO_2 Emissions

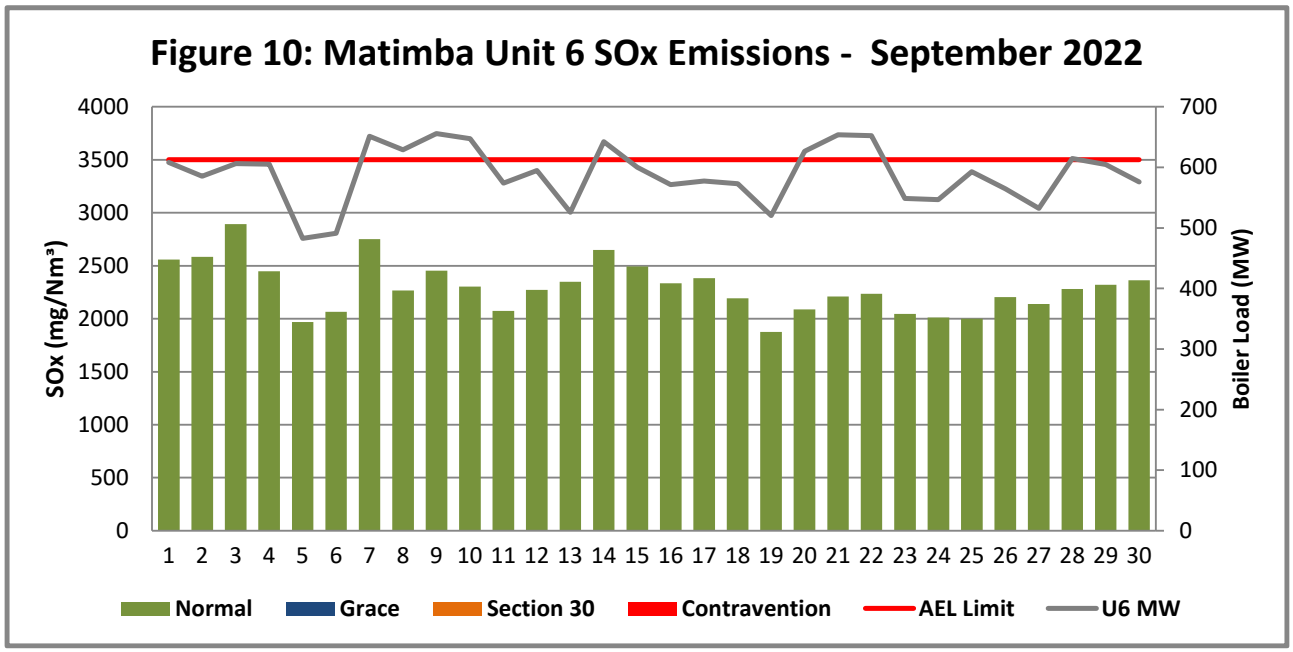

Figure 10: SO2 daily average emissions against emission limit for unit 6 for the month of September 2022

Interpretation:

All daily averages remained below SO_2 emission monthly limit of 3500 mg/Nm^3.

.

Unit 1 NO_x Emissions

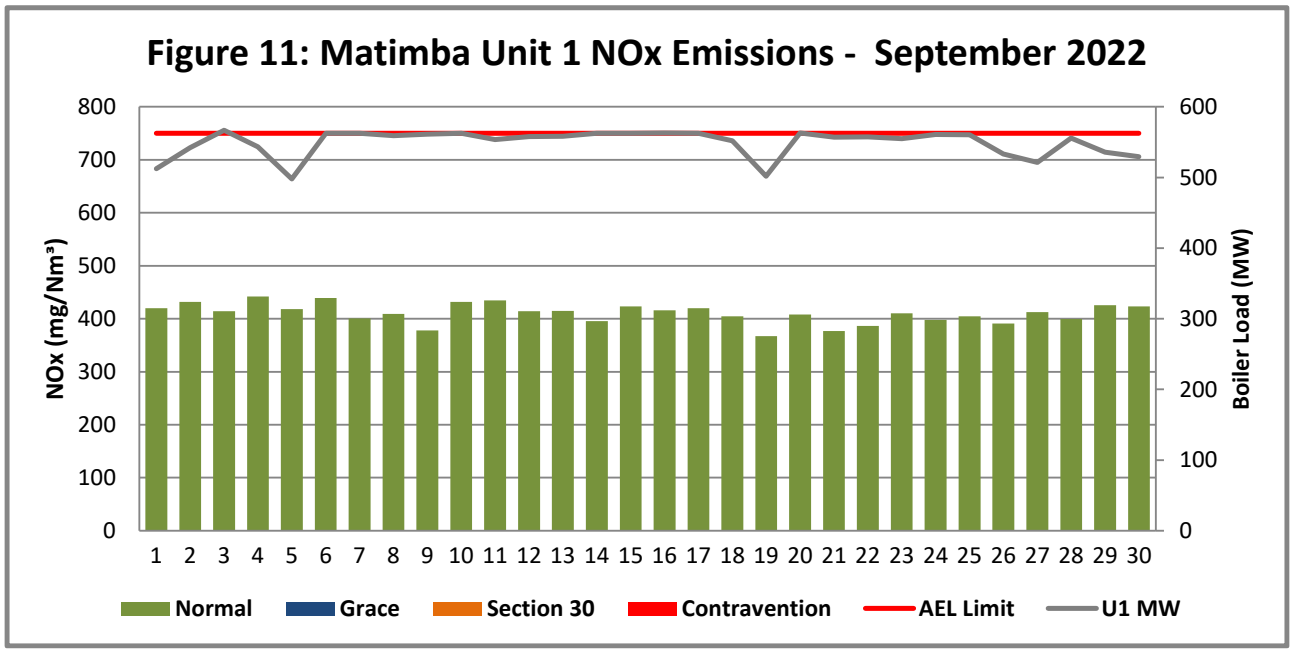

Figure 11: NOx daily average emissions against emission limit for unit 1 for the month of September 2022

Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 2 NO_x Emissions

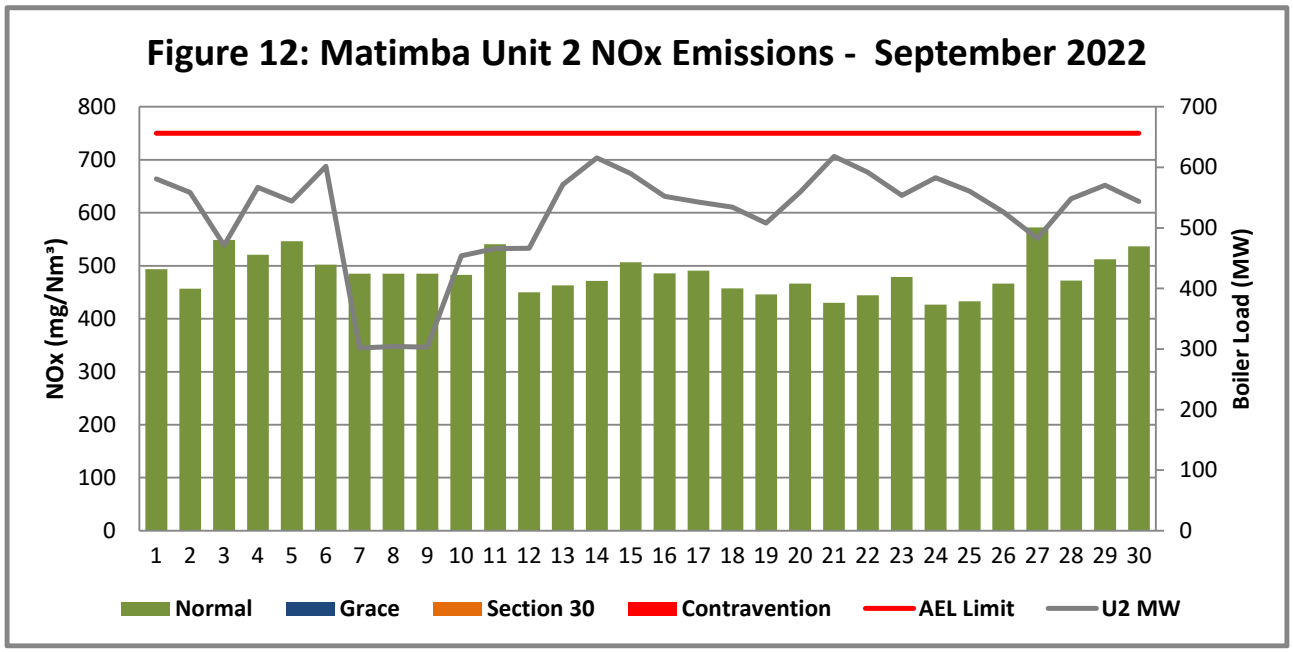

Figure 12: NOx daily average emissions against emission limit for unit 2 for the month of September 2022

Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 3 NO_x Emissions

Interpretation:

Unit 3 has been off load on outage from 13 August 2022.

Unit 4 NO_x Emissions

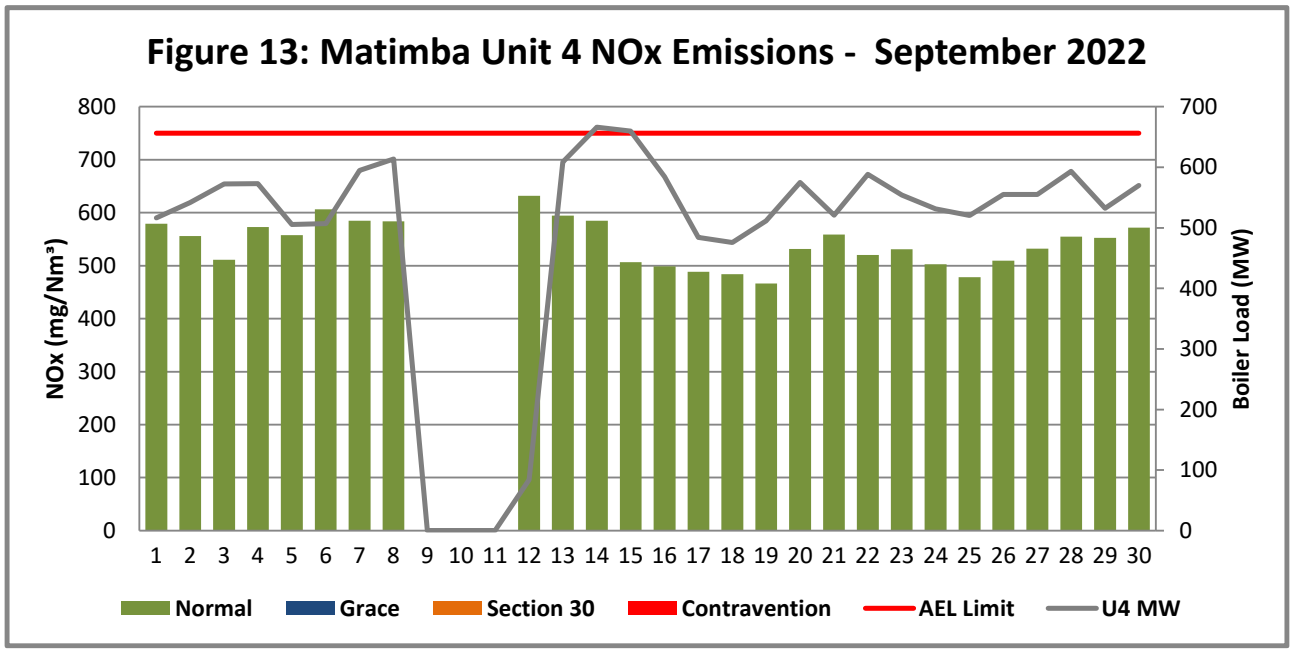

Figure 13: NOx daily average emissions against emission limit for unit 4 for the month of September 2022

Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 5 NO_x Emissions

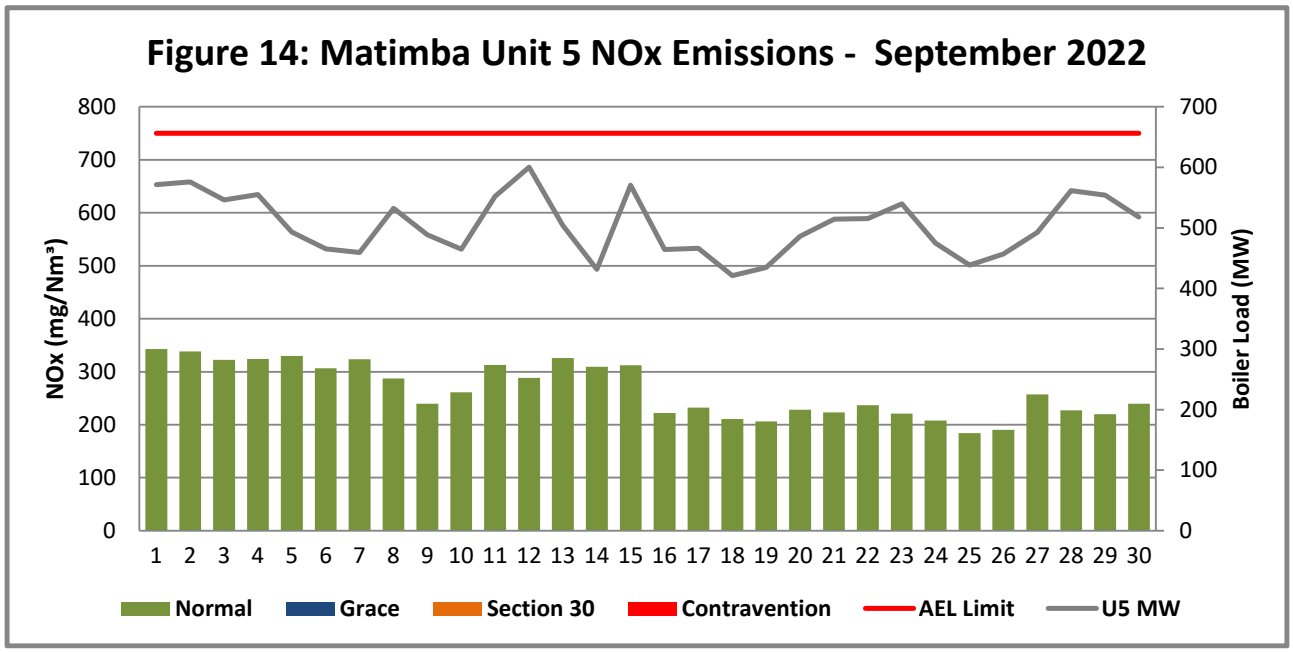

Figure 14: NOx daily average emissions against emission limit for unit 5 for the month of September 2022

Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 6 NO_x Emissions

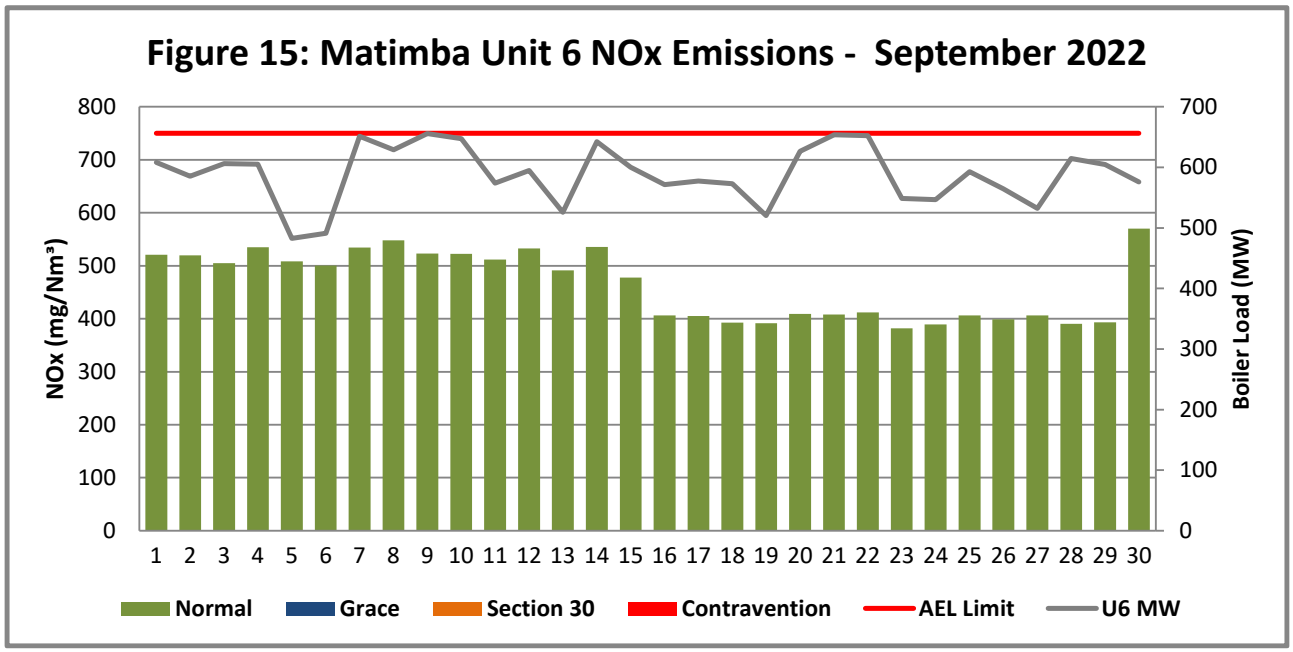

Figure 15: NOx daily average emissions against emission limit for unit 6 for the month of September 2022

Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm^3.

2.4.3 Total Volatile Organic Compounds

Table 4: Total volatile compound estimates

Eskom

CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*

Date:	Thursday, 20 October 2022
Station:	Matimba Power Station
Province:	Limpopo Province
Tank no.	1-4
Description:	Outdoor fuel oil storage tank
Tank Type:	Vertical fixed roof (vented to atmosphere)
Material stored:	Fuel Oil 150

MONTHLY INPUT DATA FOR THE STATION

Please only insert relevant monthly data inputs into the *blue cells* below
Choose from a dropdown menu in the *green cells*
The total VOC emissions for the month are in the *red cells*

IMPORTANT: Do not change ***any*** other cells without consulting the AQ CoE

MONTH:	**September**	
GENERAL INFORMATION:	**Data**	**Unit**
Total number of fuel oil tanks:	4	NA
Height of tank:	13,34	m
Diameter of tank:	9,53	m
Net fuel oil throughput for the month:	***1252,791***	
Molecular weight of the fuel oil:	166,00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	23,43	°C
Daily maximum ambient temperature	31,06	°C
Daily minimum ambient temperature	16,52	°C
Daily ambient temperature range	14,54	°C
Daily total insolation factor	4,41	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0,68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0,54	kg/month
Working losses:	0,04	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0,58**	**kg/month**

*Calculations performed on this spreadsheet are taken from the USEPA AP-42- Section 7.1 Organic Liquid Storage Tanks - January 1996. This spreadsheet is derived from materials provided by Jimmy Peress, PE, Tritech Consulting Engineers, 85-93 Chevy Chase Street, Jamaica, NY 11432 USA, Tel - 718-454-3920, Fax - 718-454-6330, e-mail - PeressJ@nyc.rr.com.

2.4.4 Greenhouse gas (CO_2) emissions

CO_2 emissions are reported in terms of the Greenhouse gas reporting regulations (GN 43712, GNR. 994/2020) and are not included in the monthly AEL compliance report.

2.5 Daily power generated

Table 5: Daily power generated per unit in MWh for the month of September 2022

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2022/09/01	11186	12491	0	11285	12419	13217
2022/09/02	11858	475	0	11811	12515	12722
2022/09/03	12389	2586	0	12442	11814	13159
2022/09/04	11897	12161	0	12530	12020	13105
2022/09/05	10819	11630	0	10991	10653	7241
2022/09/06	12312	11405	0	11031	10032	8970
2022/09/07	12296	5141	0	12948	9916	14185
2022/09/08	12222	6271	0	9368	11525	13601
2022/09/09	12268	5283	0	0	10566	14227
2022/09/10	12310	9350	0	0	10059	14097
2022/09/11	12137	9886	0	0	11944	12449
2022/09/12	12175	9902	0	0	12958	12861
2022/09/13	12234	12190	0	13092	10936	11418
2022/09/14	12331	13229	0	14575	9321	13935
2022/09/15	12326	12647	0	14447	12346	13063
2022/09/16	12309	11800	0	12804	10050	12381
2022/09/17	12303	11574	0	10568	10040	12505
2022/09/18	12094	11400	0	10343	9095	12461
2022/09/19	10907	10834	0	11024	9353	11263
2022/09/20	12314	11924	0	12581	10468	13611
2022/09/21	12207	13289	0	11362	11106	14266
2022/09/22	12210	12719	0	12806	9206	14181
2022/09/23	12137	11834	0	12092	9443	11931
2022/09/24	12233	12479	0	11522	10278	11781
2022/09/25	12230	12016	0	11315	9454	12855
2022/09/26	11679	11237	0	12077	9847	12245
2022/09/27	11378	10217	0	12092	10638	11505
2022/09/28	12181	11678	0	864	8997	13340
2022/09/29	11703	12155	0	9480	11992	13116
2022/09/30	11573	11583	0	12424	10485	12479

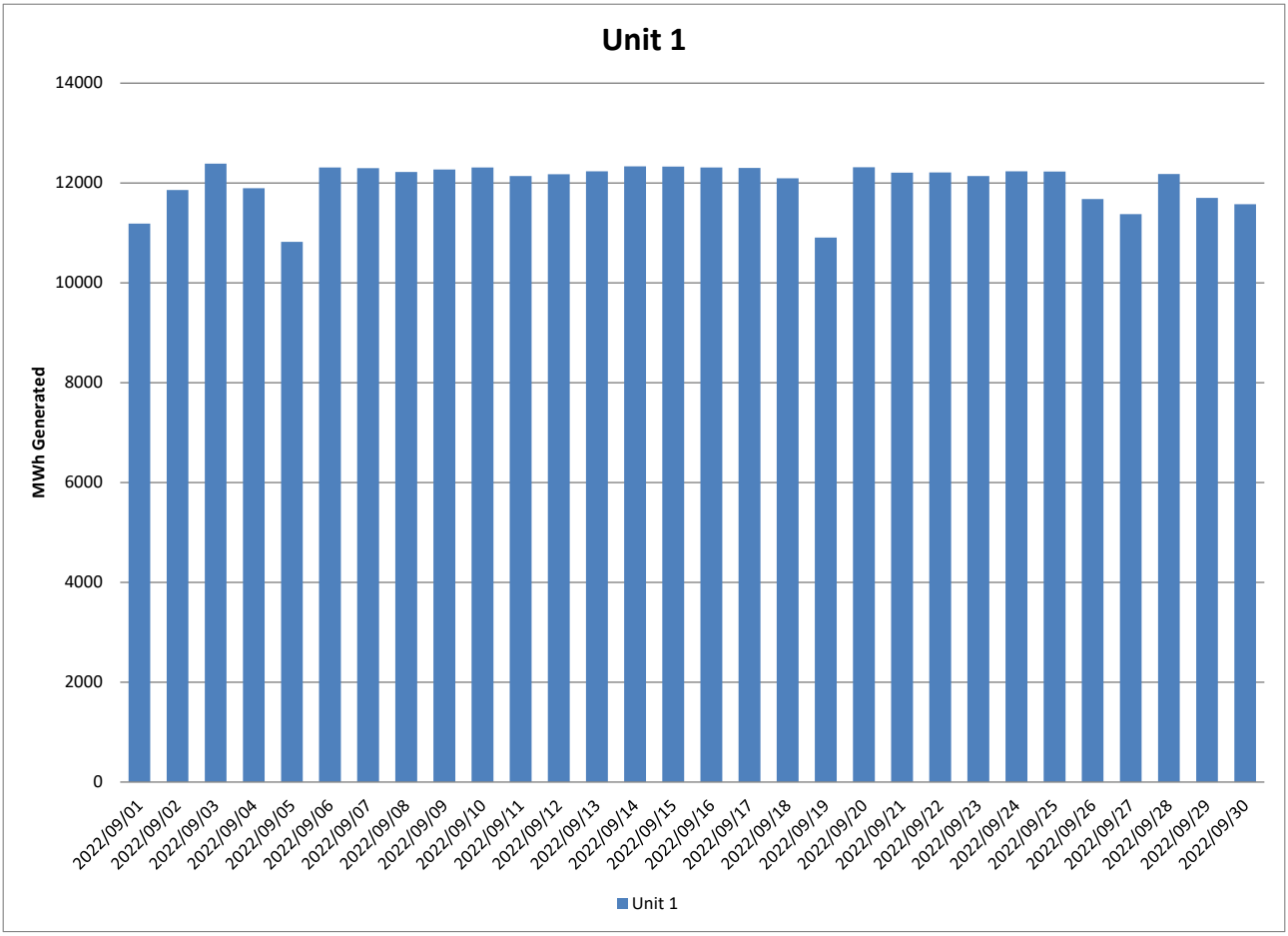

Figure 16: Unit 1 daily generated power in MWh for the month of September 2022

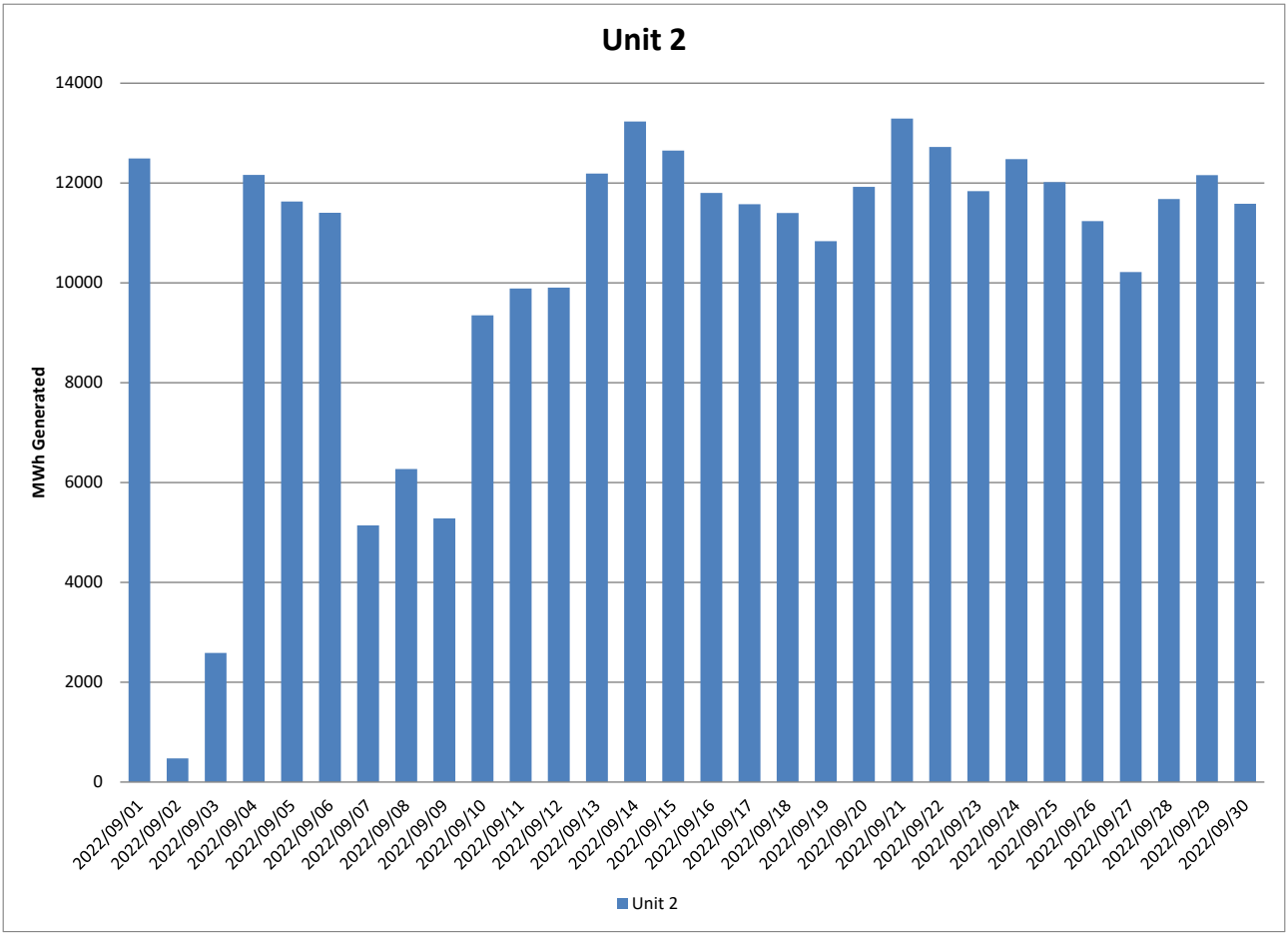

Figure 17: Unit 2 daily generated power in MWh for the month of September 2022

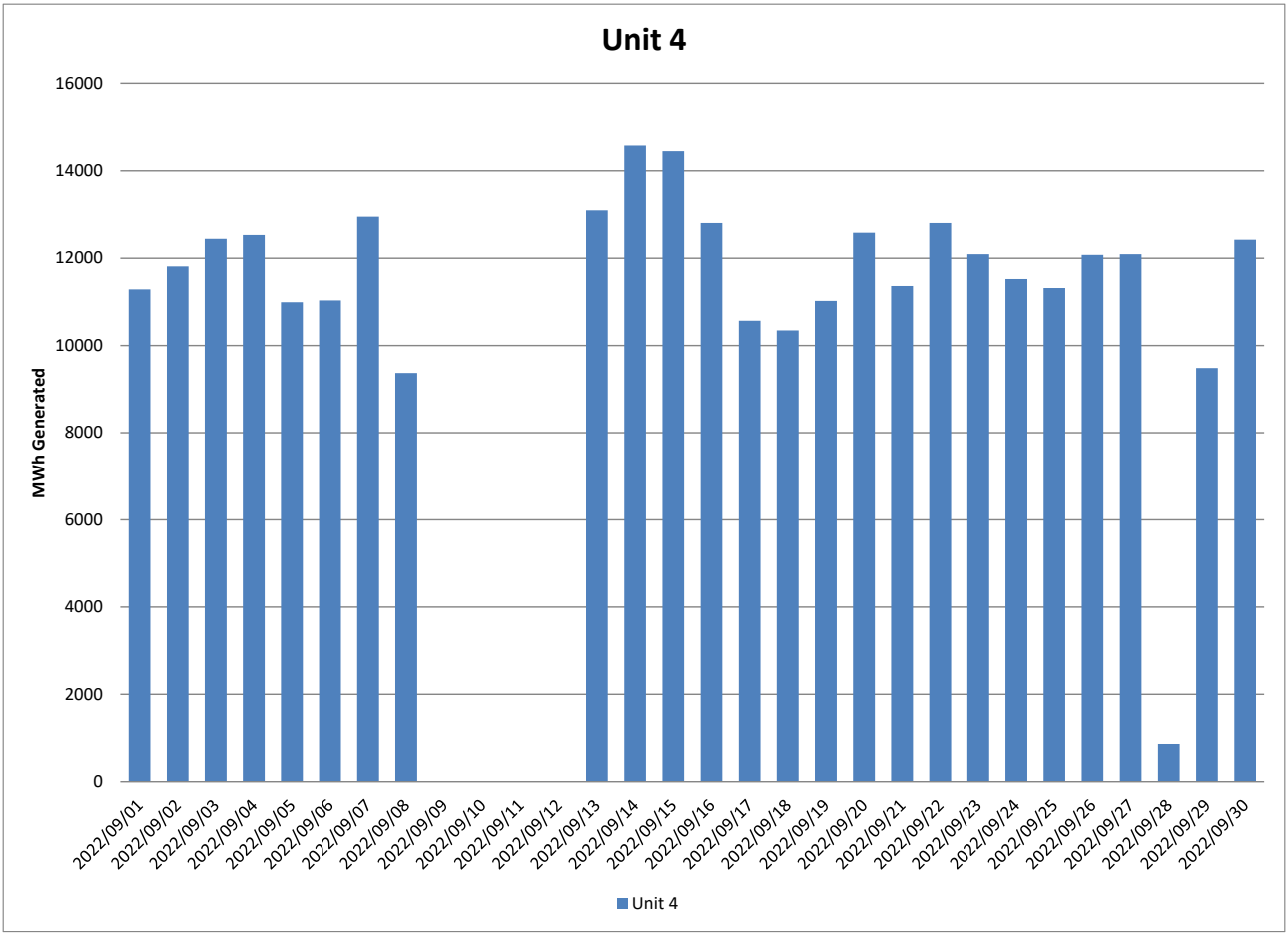

Figure 18: Unit 4 daily generated power in MWh for the month of September 2022

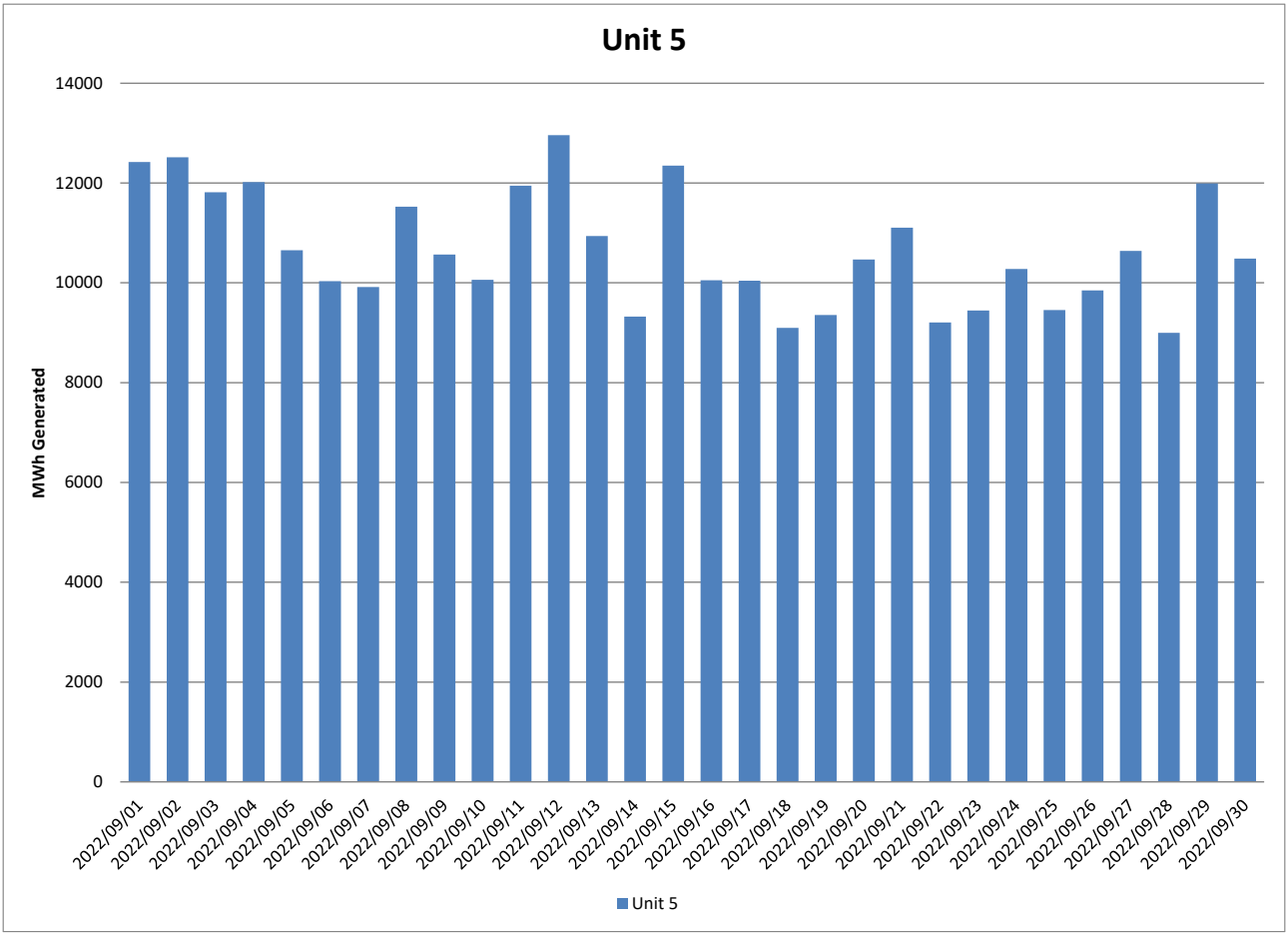

Figure 19: Unit 5 daily generated power in MWh for the month of September 2022

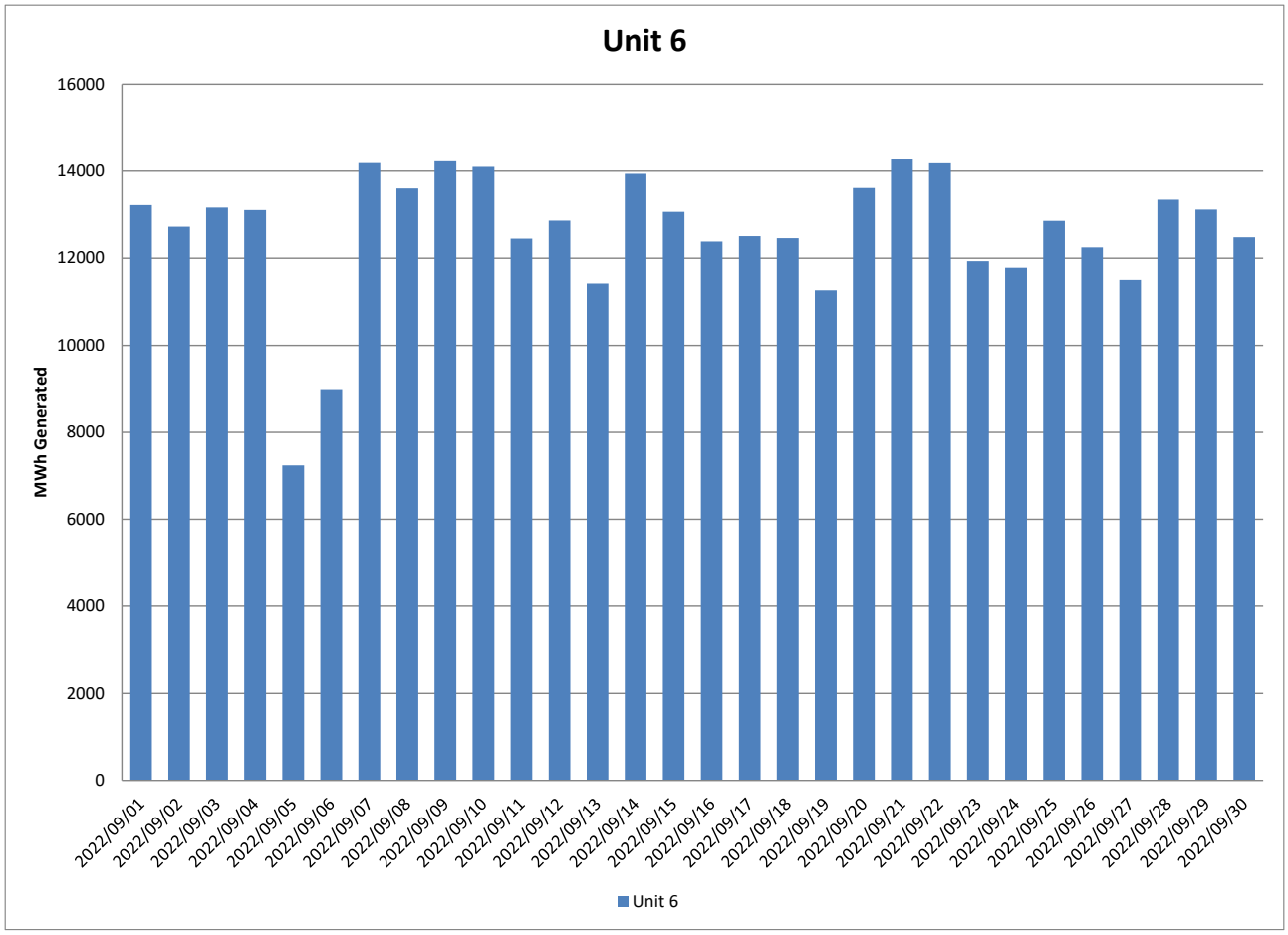

Figure 20: Unit 6 daily generated power in MWh for the month of September 2022

2.6 Pollutant Tonnages

The emitted pollutant tonnages for September 2022 are provided in table 6. CO_2 values for units 4 and 5 were calculated per balance, from O_2 values, due to analyser providing unreliable data. Averaged values for CO_2 were used for Unit 2 on 3-6, 8-9, 10-3 and 15-30 September 2022 due to unreliable data from analysers. Averaged quality assurance level 2 test values for O_2 were used for Unit 1 due to the analysers being providing unreliable data. Averaged monthly emissions were used for CO_2 values for Unit 6 on 1-6 an 8-12 September 2022 due to unreliable values from analyser. Matimba is currently in the process of implementing recommended changes on gaseous emission analysers to improve the reliability of the data. Unit 3 has been on Outage since August 2022.

Table 6: Pollutant tonnages for the month of September 2022

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	51,4	3 891,6	687,3
Unit 2	31,1	5 711,4	1 012,5
Unit 3	0,0	0,0	0,0
Unit 4	57,0	3 642,5	861,4
Unit 5	65,8	2 702,8	524,6
Unit 6	71,8	5 006,2	1 008,7
SUM	277,0	20 954,5	4 094,4

2.7 Reference values

Table 7: Reference values for data provided, September 2022

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	8,69	11,10	Unit off	7,21	7,26	7,96
Moisture	%	4,53	3,84	Unit off	3,36	3,71	2,85
Velocity	m/s	23,3	32,7	Unit off	24,1	24,9	28,1
Temperature	^oC	145,4	125,1	Unit off	136,4	121,6	125,6
Pressure	mBar	933,1	1 063,5	Unit off	906,5	895,2	915,5

2.8 Continuous Emission Monitors

2.8.1 Reliability

Table 8: Average percentage (%) availability of monitors for the month of September 2022.

Associated Unit/Stack	PM	SO_2	NO
Unit 1	100,0	99,9	99,9
Unit 2	100,0	99,7	89,2
Unit 3	Unit off	Unit off	Unit off
Unit 4	100,0	99,8	99,8
Unit 5	100,0	99,9	98,2
Unit 6	100,0	99,7	99,7

2.8.2 Changes, downtime, and repairs

Unit 1

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 2

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 3

- Unit on outage

Unit 4

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 5

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 6

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

2.8.3 Sampling dates and times

Table 9: Dates of last conducted CEMS verification tests for PM, SO_2 and NOx

Name of service provider:		Stacklabs Environmental Services CC		
Address of service provider:		10 Chisel Street Boltonia Krugersdorp 1739		
Stack/ Unit	**PM**	**SO_2**	**NOx**	**CO_2**
1	2020/09/30 06h04	2020/09/09 13h00	2020/09/09 13h00	2020/09/09 13h00
2	2021/01/26 04h52	2021/01/27 13h00	2021/01/27 13h00	2021/01/27 13h00
3	2021/08/10 12h05	2020/09/24 07h00	2020/09/24 07h00	2020/09/24 07h00
4	2021/07/13 14h31	2020/09/16 02h00	2020/09/16 02h00	2020/09/16 02h00
5	2020/10/06 05h39	2020/10/08 02h30	2020/10/08 02h30	2020/10/08 02h30
6	2020/09/09 06h41	2020/09/09 13h00	2020/09/09 13h00	2020/09/09 13h00

Correlation curves are currently overdue for Unit 1, Unit 5, and Unit 6. Quality assurance level 2 curves are overdue for unit 1, unit 3, unit 4, unit 5 and unit 6. The new tests have been completed however, due to errors and disputes identified in the test reports during the review process updated curves have not yet been implemented. The disputes and corrections are being addressed by Matimba and the service provider and new curves will be implemented as soon as they are confirmed to be correct.

2.9 Units Start-up information

Table 10: Start-up information

Unit	2	
Fires in	2022/09/03	12h41
Synchronization with Grid	2022/09/03	17h00
Emissions below limit	2022/09/03	18h57
Fires in to synchronization	4,32	HOURS
Synchronization to < Emission limit	1,95	HOURS

Unit	2	
Fires in	2022/09/07	00h33
Synchronization with Grid	2022/09/07	03h47
Emissions below limit	2022/09/07	11h00
Fires in to synchronization	3,23	HOURS
Synchronization to < Emission limit	7,22	HOURS

Unit	2	
Fires in	2022/09/09	22h13
Synchronization with Grid	2022/09/10	00h34
Emissions below limit	2022/09/10	02h00
Fires in to synchronization	2,35	HOURS
Synchronization to < Emission limit	1,43	HOURS

Unit	4	
Fires in	2022/09/12	18h19
Synchronization with Grid	2022/09/12	23h24
Emissions below limit	2022/09/13	00h03
Fires in to synchronization	5,08	HOURS
Synchronization to < Emission limit	0,65	HOURS

Unit	4	
Fires in	2022/09/28	23h47
Synchronization with Grid	2022/09/29	04h03
Emissions below limit	2022/09/29	07h00
Fires in to synchronization	4,27	HOURS
Synchronization to < Emission limit	2,95	HOURS

Unit	5	
Fires in	2022/09/22	20h57
Synchronization with Grid	2022/09/22	23h56
Emissions below limit	2022/09/23	01h00
Fires in to synchronization	2,98	HOURS
Synchronization to < Emission limit	1,07	HOURS

Unit	5	
Fires in	2022/09/23	01h29
Synchronization with Grid	2022/09/23	04h40
Emissions below limit	2022/09/23	07h00
Fires in to synchronization	3,18	HOURS
Synchronization to < Emission limit	2,33	HOURS

Unit	5	
Fires in	2022/09/28	10h44
Synchronization with Grid	2022/09/28	13h37
Emissions below limit	2022/09/28	17h01
Fires in to synchronization	2,88	HOURS
Synchronization to < Emission limit	3,4	HOURS

Unit	6	
Fires in	2022/09/05	16h33
Synchronization with Grid	2022/09/05	21h22
Emissions below limit	2022/09/05	21h22
Fires in to synchronization	4,82	HOURS
Synchronization to < Emission limit	0	HOURS

Unit	6	
Fires in	2022/09/05	23h53
Synchronization with Grid	2022/09/06	03h20
Emissions below limit	2022/09/06	03h40
Fires in to synchronization	3,45	HOURS
Synchronization to < Emission limit	0,33	HOURS

2.10 Emergency generation

Table 11: Emergency generation

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control	640,9667	595,1167	0	512,1667	625,2367	630,7667
Emergency Hours declared including hours after stand down	648,9667	603,1167	0	520,1667	633,2367	638,7667
Days over the Limit during Emergency Generation	0	0	0	1	5	2

Unit 4 exceeded the 50mg/Nm^3 limit for one day during emergency generation, on 17 September 2022. Unit 5 exceeded the 50mg/Nm^3 limit for five days during emergency generation, on 5, 6, 9, 13 and 18 September 2022. Unit 6 exceeded the 50mg/Nm^3 limit for two days during emergency generation, on 12 and 23 September 2022.

2.11 Complaints register

Table 12: Complaints

Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident	Dispersion modelling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
N/A					

2.12 Air quality improvements and social responsibility conducted

2.12.1 Air quality improvements

None

2.12.2 Social responsibility conducted

None

2.13 Ambient air quality monitoring

Five exceedances of the $PM_{2.5}$ daily limit and eight exceedances of the PM_{10} daily limit occurred during the period under review. There were fifty-seven exceedances of the Ozone 8-hour moving average recorded for the reporting period. No other exceedances were recorded for the period under review.

The average data recovery for the period was 88,3% and the station availability was 95,5%.

Ambient CO, NO2 and Hg concentrations at Marapong monitoring site show influence of emissions from low level sources in the area and ambient PM2.5, PM10 and SO2 concentrations are contributed to by emissions from low level sources and high-level sources. Detailed results can be found in Attachment 1, “Marapong Monthly Report_September_2022”.

2.14 Electrostatic precipitator and Sulphur plant status

Unit 1

- 3 fields out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 2

- 2 fields out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 3

- Unit on outage

Unit 4

- 3 field out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 5

- 4 field out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 6

- 2 fields out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

SO3 common plant

- No abnormalities on the sulphur storage plant.

2.15 General

Name and reference number of the monitoring methods used:

1. Particulate and gas monitoring according to standards
    a. BS EN 14181:2004 - Quality Assurance of Automated Measuring Systems
    b. ESKOM internal standard 240-56242363 Emissions Monitoring and Reporting Standard

Sampling locations:

1. Stack one
    a. Particulates:
        i. S23º 40' 2.8" E027º 36' 34.8" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23º 40' 2.8" E027º 36' 34.8" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meters consist of 3 flues
2. Stack two
    a. Particulates:
        i. S23º 40' 14.8" E027º 36' 47.5" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23º 40' 14.8" E027º 36' 47.5" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meters consist of 3 flues

3. Attachments

Marapong Monthly Report_September 2022

4. Report Conclusion

The rest of the information demonstrating compliance with the emission license conditions is supplied in the annual emission report sent to your office.

Hoping the above will meet your satisfaction.

I hereby declare that the information in this report is correct.

Yours sincerely

GENERAL MANAGER: MATIMBA POWER STATION